returned from the pressure chamber **124** to the tank. Thereby, piston rod **123** is moved upward and the driver's seat **1** rises. When the controlled body **110** is moved downward, in an opposite reaction against the above, the piston rod **123** is moved downward so that the driver's seat falls. Thus, accompanying with the vertical movement of the controlled body **110**, the driver's seat **1** vibrates. In this case, the amount of inflow oil and outflow oil to a lower pressure chamber **125** or an upper pressure chamber **124**, changes by the displacement of the first valve rod **104** in the pilot stage **102**, so that the piston rod **123** vibrates at a speed in proportion to the oil flow. The detection signals from the first displacement transducer **112** and the second displacement transducer **129** are sent to the vibration generator by dynamic electricity **108** as feedback, which enables precise control.

In the eighth embodiment, if a driver feels drowsiness coming on, the driver can operate switches installed on a control panel such as control panel **14**, FIG. **6**, whereby alternating current is sent into the coil **108***a* of vibration generator by dynamic electricity **108** so that a servo valve **101** operates to supply oil from the hydraulic pump to the pressure chambers **124** and **125** of the hydraulic cylinder **120** and the piston rod **123** moves vertically and the driver is kept alert and traffic accidents will be prevented.

In the ninth embodiment in FIG. **22**, the vibration generator, by dynamic electricity **130**, is adapted to vibrate the driver's seat **1**. In detail, support axes **133** of the vibration generator, by dynamic electricity **130**, are extended from opposite sides, at the right and left in horizontal direction, and supported by support base, not shown. And also, in the vibration generator by dynamic electricity **130**, a base **135**, wherein the driver's seat is fixed, is supported by iron core **134**. The iron core **134** has an annular body magnetic pole **136**, an annular upper yoke **137** fixed on an upper part of annular body magnetic pole **136**, an annular lower yoke **138** fixed on a lower part of body magnetic pole **136**, an annular upper center magnetic pole **139** and a lower center magnetic pole **140**, arranged concentrically, wherein annular exciting coils **143** and **144** are arranged concentrically in two divided spaces of upper annular chamber **141** and lower annular chamber **142** formed thereby. Both exciting coils **143** and **144** are, like in embodiment four, electrically connected with the battery **17** of the automobile **15**, so that the battery supplies direct current to both exciting coils **143** and **144**.

An annular cavity **145**, connecting the spaces of upper chamber **141** and lower chamber **142**, is formed concentrically with exciting coils **143** and **144** in a central annular projecting portion **136***a* of body magnetic pole **136**, while a bore **146** is formed through the center of upper center magnetic pole **139**. Linear ball bearing **149** is fixed on the upper part of pit **146**. A connecting holes **151**, connecting with upper space **141**, are formed at regular intervals in upper yoke **137**. A hole of small diameter is formed on the upper portion of lower center magnetic pole **140**, and a hole of larger diameter is formed under the hole of small diameter. Linear ball bearing **147** is fixed in the small diameter while air spring **148** is positioned in the hole of larger diameter.

Supporting rod **150**, which extends downward from the center of the underside of base **135**, passes through bore **146** of upper center magnetic pole **139** and the hole of small diameter of lower center magnetic pole **140** and is supported by air spring **148**, for free vertical-sliding-movement by linear ball bearings **147** and **149**. Connecting piece **152** extends downward through connecting hole **151** on the lower part of base **135**, and is connected, through connecting hole **151**, with annular driving coil **153**. Driving coil **153** is arranged in the cavity concentrically with concentric exciting coils **143** and **144**. Driving coil **153** is electrically connected, through an inverter, with battery **17**, whereby electricity, supplied to the driving coil **153** is converted into alternating current. An on-off switch, not shown, controls the supply of electricity to driving coil **153** and is arranged in a control panel, such as control panel **14**, FIG. **6**. In FIG. **22**, **154** is an air seal and **155** is a loop spring, which works as a baffle.

In the ninth embodiment, when the switch of the control panel is turned on, direct current is charged through exciting coils **143** and **144** and magnetic flux in the direct of arrow A is formed and alternating current is charged through the driving coil **153** at right angles to the magnetic flux of the direct current in coils **143**, **144**. According to Fleming's rule, an excitation force works in the B arrow directions, and the driver's seat vibrates. Therefore, if a driver feels drowsiness coming on, the driver can vibrate the driver's seat **1** by turning on the switch, preventing dozing during driving and accidents caused thereby.

## EFFECTS OF THE INVENTION

Thus, according to this invention, a driver's seat having a vibration generator connected to the driver's seat and controls for turning the vibration generator on and off for vibrating the driver's seat so that when a driver feels drowsiness coming on, the driver can operate the controls for switching on-off the vibration generator so that driver's seat can be vibrated and prevent the driver from dozing during driving and prevent an accident from occurring.

What is claimed is:

**1**. An apparatus for vibrating a seat, comprising:
- a driver's seat;
- base means for supporting said driver's seat;
- fastener means for supporting said seat onto said base means, said fastener means being positioned between said seat and said base means;
- vibrating means for vibrating said driver's seat, said vibrating means being mounted underneath said base means;
- spring means for resiliently supporting said base means onto a bed member; and
- control means for controlling said vibrating means in vibrating the seat,

**2**. An apparatus for vibrating a seat as recited in claim **1**, wherein said fastener means comprises a plurality of angle fasteners, each having a substantially L-shaped configuration, and having at least a stationary plate bolted onto a radial outward slant thereof.

**3**. An apparatus for vibrating a seat as recited in claim **1**, wherein said vibrating means for vibrating said driver's seat comprises a vibrating motor connected to said driver's seat.

**4**. An apparatus for vibrating a seat as recited in claim **3**, wherein said vibrating motor includes an output shaft having, on opposite ends thereof, eccentric loads for causing vibration of said base means and said seat.

**5**. An apparatus for vibrating a seat as recited in claim **4**, wherein said eccentric loads comprise at least a fixed load and at least an adjustable load.

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